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P#18

TECH CENTER 1600/2011

1600

RAW SEQUENCE LISTING

DATE: 06/17/2003

PATENT APPLICATION: US/09/508,849A TIME: 07:40:19

Input Set : A:\2003-06-09 1110-0266P.ST25.txt
Output Set: N:\CRF4\06172003\1508849A.raw

```
3 <110> APPLICANT: NAGATA, Shigekazu
 4
         TANAKA, Masato
 6 <120> TITLE OF INVENTION: Novel Fas Ligand Derivative
 8 <130> FILE REFERENCE: 1110-0266P
10 <140> CURRENT APPLICATION NUMBER: 09/508,849A
11 <141> CURRENT FILING DATE: 2001-03-17
13 <150> PRIOR APPLICATION NUMBER: PCT/JP98/04187
14 <151> PRIOR FILING DATE: 1998-09-17
16 <150> PRIOR APPLICATION NUMBER: JP 9-252541
17 <151> PRIOR FILING DATE: 1997-09-17
19 <160> NUMBER OF SEQ ID NOS: 17
21 <170> SOFTWARE: PatentIn version 3.2
                                                                 ENTERED
23 <210> SEO ID NO: 1
24 <211> LENGTH: 258
25 <212> TYPE: PRT
26 <213> ORGANISM: Artificial Sequence
28 <220> FEATURE:
29 <223> OTHER INFORMATION: Description of Artificial Sequence:amino acids at
30
         111-133 from N terminal are deleted from natural
        human Fas ligand
33 <400> SEQUENCE: 1
34 Met Gln Gln Pro Phe Asn Tyr Pro Tyr Pro Gln Ile Tyr Trp Val Asp
37 Ser Ser Ala Ser Ser Pro Trp Ala Pro Pro Gly Thr Val Leu Pro Cys
                20
                                    25
40 Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro Pro
43 Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Pro Leu Pro
       50
                            55
46 Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
                        70
                                            75
49 Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
                    85
                                        90
52 Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Pro Ser
               100
                                   105
55 Pro Pro Pro Glu Lys Lys Glu Leu Arg Lys Val Ala His Leu Thr Gly
                               120
58 Lys Ser Asn Ser Arg Ser Met Pro Leu Glu Trp Glu Asp Thr Tyr Gly
                           135
      130
                                               140
61 Ile Val Leu Leu Ser Gly Val Lys Tyr Lys Lys Gly Gly Leu Val Ile
                       150
                                           155
64 Asn Glu Thr Gly Leu Tyr Phe Val Tyr Ser Lys Val Tyr Phe Arg Gly
```

170

65

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PATENT APPLICATION: US/09/508,849A TIME: 07:40:19

Input Set: A:\2003-06-09 1110-0266P.ST25.txt
Output Set: N:\CRF4\06172003\I508849A.raw

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67 Gln Ser Cys Asn Asn Leu Pro Leu Ser His Lys Val Tyr Met Arg Asn
               180
                                    185
70 Ser Lys Tyr Pro Gln Asp Leu Val Met Met Glu Gly Lys Met Met Ser
                                200
           195
73 Tyr Cys Thr Thr Gly Gln Met Trp Ala Arg Ser Ser Tyr Leu Gly Ala
                           215
       210
76 Val Phe Asn Leu Thr Ser Ala Asp His Leu Tyr Val Asn Val Ser Glu
                       230
                                            235
77 225
79 Leu Ser Leu Val Asn Phe Glu Glu Ser Gln Thr Phe Phe Gly Leu Tyr
                                        250
82 Lys Leu
86 <210> SEQ ID NO: 2
87 <211> LENGTH: 277
88 <212> TYPE: PRT
89 <213> ORGANISM: Artificial Sequence
91 <220> FEATURE:
92 <223> OTHER INFORMATION: Description of Artificial Sequence: amino acids at
         128-131 from N terminal are deleted from natural
93
94
         human Fas ligang
96 <400> SEQUENCE: 2
97 Met Gln Gln Pro Phe Asn Tyr Pro Tyr Pro Gln Ile Tyr Trp Val Asp
                     5
                                         10
100 Ser Ser Ala Ser Ser Pro Trp Ala Pro Pro Gly Thr Val Leu Pro Cys
                 20
103 Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro Pro
104
106 Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Pro Leu Pro
107
         50
                             55
109 Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
                         70
112 Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
                     85
                                          90
115 Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala
                                     105
                100
118 Glu Leu Arg Glu Ser Thr Ser Gln Met His Thr Ala Ser Ser Leu Gly
            115
                                120
                                                     125
121 His Pro Ser Pro Pro Pro Glu Lys Lys Glu Leu Arg Lys Val Ala His
                            135
124 Leu Thr Gly Lys Ser Asn Ser Arg Ser Met Pro Leu Glu Trp Glu Asp
                                             155
125 145
                        150
127 Thr Tyr Gly Ile Val Leu Leu Ser Gly Val Lys Tyr Lys Lys Gly Gly
128
                                         170
                    165
130 Leu Val Ile Asn Glu Thr Gly Leu Tyr Phe Val Tyr Ser Lys Val Tyr
                180
                                    185
                                                         190
133 Phe Arg Gly Gln Ser Cys Asn Asn Leu Pro Leu Ser His Lys Val Tyr
            195
                                200
136 Met Arg Asn Ser Lys Tyr Pro Gln Asp Leu Val Met Met Glu Gly Lys
                            215
                                                 220
139 Met Met Ser Tyr Cys Thr Thr Gly Gln Met Trp Ala Arg Ser Ser Tyr
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RAW SEQUENCE LISTING DATE: 06/17/2003
PATENT APPLICATION: US/09/508,849A TIME: 07:40:19

Input Set : A:\2003-06-09 1110-0266P.ST25.txt
Output Set: N:\CRF4\06172003\I508849A.raw

```
140 225
                        230
                                             235
142 Leu Gly Ala Val Phe Asn Leu Thr Ser Ala Asp His Leu Tyr Val Asn
                    245
                                        250
145 Val Ser Glu Leu Ser Leu Val Asn Phe Glu Glu Ser Gln Thr Phe Phe
                260
                                     265
146
148 Gly Leu Tyr Lys Leu
            275
149
152 <210> SEQ ID NO: 3
153 <211> LENGTH: 281
154 <212> TYPE: PRT
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Description of Artificial Sequence:point mutation
          of a substitution of Lys 129 for Ala from N
159
          terminal is present in natural human Fas ligand
160
161
163 <400> SEQUENCE: 3
164 Met Gln Gln Pro Phe Asn Tyr Pro Tyr Pro Gln Ile Tyr Trp Val Asp
                                          10
167 Ser Ser Ala Ser Ser Pro Trp Ala Pro Pro Gly Thr Val Leu Pro Cys
                 20
                                      25
170 Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro Pro
             35
                                  40
173 Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Pro Leu Pro
                             55
176 Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
177 65
                         70
179 Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
                     85
                                          90
182 Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala
                100
                                     105
185 Glu Leu Arg Glu Ser Thr Ser Gln Met His Thr Ala Ser Ser Leu Glu
            115
                                 120
                                                     125
188 Ala Gln Ile Gly His Pro Ser Pro Pro Pro Glu Lys Lys Glu Leu Arg
        130
                            135
191 Lys Val Ala His Leu Thr Gly Lys Ser Asn Ser Arg Ser Met Pro Leu
                        150
                                            155
192 145
194 Glu Trp Glu Asp Thr Tyr Gly Ile Val Leu Leu Ser Gly Val Lys Tyr
                    165
                                         170
197 Lys Lys Gly Gly Leu Val Ile Asn Glu Thr Gly Leu Tyr Phe Val Tyr
198
                180
                                     185
200 Ser Lys Val Tyr Phe Arg Gly Gln Ser Cys Asn Asn Leu Pro Leu Ser
                                 200
            195
203 His Lys Val Tyr Met Arg Asn Ser Lys Tyr Pro Gln Asp Leu Val Met
                            215
                                                 220
206 Met Glu Gly Lys Met Met Ser Tyr Cys Thr Thr Gly Gln Met Trp Ala
207 225
                        230
                                             235
209 Arg Ser Ser Tyr Leu Gly Ala Val Phe Asn Leu Thr Ser Ala Asp His
210
                    245
                                        250
```

DATE: 06/17/2003

TIME: 07:40:19

Input Set : A:\2003-06-09 1110-0266P.ST25.txt Output Set: N:\CRF4\06172003\I508849A.raw 212 Leu Tyr Val Asn Val Ser Glu Leu Ser Leu Val Asn Phe Glu Glu Ser 260 265 215 Gln Thr Phe Phe Gly Leu Tyr Lys Leu 216 275 219 <210> SEQ ID NO: 4 220 <211> LENGTH: 774 221 <212> TYPE: DNA 222 <213> ORGANISM: Artificial Sequence 224 <220> FEATURE: 225 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA coding for 226 amino acids SEQ ID No.1 228 <400> SEQUENCE: 4 229 atgcagcagc cetteaatta eccatateee cagatetaet gggtggacag cagtgecage 60 230 tetecetggg eccetecagg cacagttett ecctgtecaa ectetgtgee cagaaggeet 120 231 ggtcaaagga ggccaccacc accaccgcca ccgccaccac taccacctcc gccgccgccg 180 232 ccaccactgc ctccactacc gctgccaccc ctgaagaaga gagggaacca cagcacaggc 240 233 ctqtqtctcc ttgtgatgtt tttcatggtt ctggttgcct tggtaggatt gggcctgggg 300 234 atqtttcaqc tcttccacct acagaaggag cccagtccac cccctgaaaa aaaggagctg 360 235 aggaaagtgg cccatttaac aggcaagtcc aactcaaggt ccatgcctct ggaatgggaa 420 236 gacacctatg gaattgtcct gctttctgga gtgaagtata agaagggtgg ccttgtgatc 480 237 aatgaaactg ggctgtactt tgtatattcc aaagtatact tccggggtca atcttgcaac 540 238 aacctgccc tgagccacaa ggtctacatg aggaactcta agtatcccca ggatctggtg 600 239 atgatggagg ggaagatgat gagctactgc actactgggc agatgtgggc ccgcagcagc 660 240 tacctggggg cagtgttcaa tettaccagt getgateatt tatatgtcaa egtatetgag 720 241 ctctctctgg tcaattttga ggaatctcag acgtttttcg gcttatataa gctc 244 <210> SEQ ID NO: 5 245 <211> LENGTH: 831 246 <212> TYPE: DNA 247 <213> ORGANISM: Artificial Sequence 249 <220> FEATURE: 250 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA coding for 251 amino acids SEQ ID No.2 253 <400> SEQUENCE: 5 254 atgcagcage cetteaatta eccatateee cagatetaet gggtggacag cagtgecage 60 255 tetecetggg eccetecagg cacagttett ecctgtecaa ectetgtgee cagaaggeet 120 256 gqtcaaagga ggccaccacc accaccgcca ccgccaccac taccacctcc gccgccgc 180 257 ccaccactqc ctccactacc qctqccaccc ctgaagaaga gagggaacca cagcacaggc 240 258 ctqtqtctcc ttqtqatqtt tttcatqqtt ctqqttqcct tqqtaqqatt gqqcctqggg 300 259 atgtttcagc tcttccacct acagaaggag ctggcagaac tccgagagtc taccagccag 360 260 atgcacacag catcatcttt qqqccacccc agtccacccc ctqaaaaaaa qqaqctqagg 420 261 aaagtggccc atttaacagg caagtccaac tcaaggtcca tgcctctgga atgggaagac 480 262 acctatggaa ttgtcctgct ttctggagtg aagtataaga agggtggcct tgtgatcaat 540 263 gaaactgggc tgtactttgt atattccaaa gtatacttcc ggggtcaatc ttgcaacaac 600 264 ctgcccctga gccacaaggt ctacatgagg aactctaagt atccccagga tctggtgatg 660 265 atggagggga agatgatgag etactgcact actgggcaga tgtgggcccg cagcagctac 720 266 ctgggggcag tgttcaatct taccagtgct gatcatttat atgtcaacgt atctgagctc 780 267 tetetggtea attttgagga ateteagaeg tttttegget tatataaget e

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/508,849A

270 <210> SEQ ID NO: 6 271 <211> LENGTH: 843 RAW SEQUENCE LISTING DATE: 06/17/2003
PATENT APPLICATION: US/09/508,849A TIME: 07:40:19

Input Set : A:\2003-06-09 1110-0266P.ST25.txt
Output Set: N:\CRF4\06172003\I508849A.raw

272 <212> TYPE: DNA 273 <213> ORGANISM: Artificial Sequence 275 <220> FEATURE: 276 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA coding for amino acids SEQ ID No.3 279 <400> SEQUENCE: 6 280 atgcagcage cetteaatta eccatateee cagatetaet gggtggacag cagtgecage 60 281 tetecetggg eccetecagg cacagttett ecctgtecaa ectetgtgee cagaaggeet 120 282 ggtcaaagga ggccaccacc accaccgcca ccgccaccac taccacctcc gccgccgccg 180 283 ccaccactge etecactace getgecacee etgaagaaga gagggaacea cagcacagge 240 284 ctgtgtctcc ttgtgatgtt tttcatggtt ctggttgcct tggtaggatt gggcctgggg 300 285 atgtttcage tettecacet acagaaggag etggeagaac teegagagte taccagecag 360 286 atgcacacag catcatettt ggaggcacaa ataggecace ecagtecace ecetgaaaaa 420 287 aaggagetga ggaaagtgge eeatttaaca ggeaagteea aeteaaggte eatgeetetg 480 288 gaatgggaag acacctatgg aattgtcctg ctttctggag tgaagtataa gaagggtggc 540 289 cttgtgatca atgaaactgg gctgtacttt gtatattcca aagtatactt ccggggtcaa 600 290 tettgeaaca acetgeeeet gageeacaag gtetacatga ggaactetaa gtateeecag 660 291 gatctggtga tgatggaggg gaagatgatg agctactgca ctactgggca gatgtgggcc 720 292 cgcagcagct acctgggggc agtgttcaat cttaccagtg ctgatcattt atatgtcaac 780 293 gtatctgagc tctctctggt caattttgag gaatctcaga cgtttttcgg cttatataag 840 294 ctc 296 <210> SEQ ID NO: 7 297 <211> LENGTH: 20 298 <212> TYPE: DNA 299 <213> ORGANISM: Artificial Sequence 301 <220> FEATURE: 302 <223> OTHER INFORMATION: Description of Artificial Sequence:a sense primer 303 BOS6 305 <400> SEQUENCE: 7 306 cctcagacag tggttcaaag 20 309 <210> SEQ ID NO: 8 310 <211> LENGTH: 39 311 <212> TYPE: DNA 312 <213> ORGANISM: Artificial Sequence 314 <220> FEATURE: 315 <223> OTHER INFORMATION: Description of Artificial Sequence: an antisense 316 deletion primer DA4 318 <400> SEQUENCE: 8 319 ttttcagggg gtggactggg ctccttctgt aggtggaag 39 322 <210> SEQ ID NO: 9 323 <211> LENGTH: 28 324 <212> TYPE: DNA 325 <213> ORGANISM: Artificial Sequence 327 <220> FEATURE: 328 <223> OTHER INFORMATION: Description of Artificial Sequence: HFLP3 330 <400> SEQUENCE: 9 331 getetagaac atteteggtg cetgtaac - 28 334 <210> SEQ ID NO: 10 335 <211> LENGTH: 30

VERIFICATION SUMMARY

DATE: 06/17/2003

PATENT APPLICATION: US/09/508,849A

TIME: 07:40:20

Input Set : A:\2003-06-09 1110-0266P.ST25.txt Output Set: N:\CRF4\06172003\I508849A.raw